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|   |             |                      |                              |                  |
|---|-------------|----------------------|------------------------------|------------------|
| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.          | CONFIRMATION NO. |
| 10/815,503  | 03/31/2004  | Vladimir Gorelik     | GK-EIS-1076 /<br>500593.2006 | 8215             |
| 26418   | 7590        | 01/12/2007           | EXAMINER                     |                  |
| REED SMITH, LLP<br>ATTN: PATENT RECORDS DEPARTMENT<br>599 LEXINGTON AVENUE, 29TH FLOOR<br>NEW YORK, NY 10022-7650 |             |                      | LE, THI Q                    |                  |
|   |             |                      | ART UNIT                     | PAPER NUMBER     |
|   |             |                      | 2613                         |                  |
| SHORTENED STATUTORY PERIOD OF RESPONSE  |             | MAIL DATE            | DELIVERY MODE                |                  |
| 3 MONTHS  |             | 01/12/2007           | PAPER                        |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/815,503

Applicant(s)

GORELIK ET AL.

Examiner

Thi Q. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11/07/05, 3/31/04, 10/04/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

### *Information Disclosure Statement*

2. The information disclosure statements (IDS) filed on 11/07/2005, 03/31/2004 and 10/04/2004 were considered by the examiner.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless,—

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-3** are rejected under 35 U.S.C. 102(b) as being anticipated by **Speciale (US Patent # 6,301,034)**.

Consider **claim 1**, Speciale clearly shows and discloses, a sensor comprising: a diaphragm (read as, diaphragm 117; figure 1), wherein at least on one side the diaphragm further comprises a surface which reflects a light beam (read as, reflective surface 131; figure 1); a first optical waveguide (read as, optical fiber 127; figure 1) being constructed on said side as a transmitting waveguide, through which a light beam passes and strikes against the diaphragm; a second optical waveguide (read as, optical fiber 139; figure 1) being constructed at a specific

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angular relationship with respect to the first optical waveguide, said second optical waveguide having the function of a receiving waveguide and into which light reflected from the diaphragm enters; and optical means (read as, optical lenses 129 on both transmitting and receiving optical fiber; figure 1) being constructed in the light path between said diaphragm and said receiving waveguide in such a manner that the light beam is focussed onto the end face of the receiving waveguide by said optical means (figure 1; column 5 lines 28-48).

Consider **claim 2, and as applied to claim 1 above**, Speciale further discloses, wherein the sensor is a microphone (abstract).

Consider **claim 3, and as applied to claim 1 above**, Speciale further discloses, wherein said means for beam focusing comprises a focusing lens system (read as, lenses 129 attached to optical fiber 127; figure 1), which is melted onto the output of the transmitting waveguide (figure 1; column 5 lines 28-48).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
8. **Claims 3-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Speciale (US Patent # 6,301,034)** and in view of **Farr et al. (US Patent # 6,853,767)**.

Consider **claim 4**, and as applied to **claim 1** above, Speciale fails to disclose that the optical lenses are made from glass.

It is well known in the art, that the majority of focusing lens are made from glass. Further, in related art, Farr et al. disclose the method of manufacturing optical coupling elements. Wherein the optical coupling elements are an array of spherical glass lenses with circular apertures (figure 1a, column 2 lines 34-43).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to incorporate the teachings of Farr et al. with Speciale, because Farr et al. disclose a method for producing spherical glass lenses with circular apertures at a lower cost than conventional method. Thus reducing the cost of producing the photo-microphone.

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Consider **claims 5 and 6, and as applied to claim 1 above**, Speciale as modified by Farr et al. further disclose, wherein the focusing lens system is a spherical lens (read as, spherical lens array; figure 1a) , a biconvex or a planoconvex lens, a cylinder lens or a lens made from SU8; and wherein the focusing lens system is drop-shaped and/or has a circular cross section (read as, the spherical lenslets have a circular apertures) (figure 1a, column 2 lines 34-43).

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) JOHN MACDONELL; 2,666,650
- b) HERRIOTT DONALD R; 3,175,088
- c) Bogut et al.; 5,333,205
- d) Frenkel, Anatoly; 6,154,551

10. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

11. Any inquiry concerning this communication or earlier communications from the

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Examiner should be directed to Thi Le whose telephone number is (571) 270-1104. The

Examiner can normally be reached on Monday-Friday from 7:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

*Thi Le*

  
KENNETH VANDERPUYE  
SUPERVISORY PATENT EXAMINER